

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US05/00381

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : B01D 21/24; C02F 9/00, 5/08; B01L 3/00; A61L 2/00; G01N 21/00; G06F 7/00, 17/00  
 US CL : 210/98, 102, 103, 252, 416.3, 198.2, 660, 422/102, 24, 186.3; 250/428; 252/175; 700/116, 216, 231, 225, 237

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 210/98, 102, 103, 252, 416.3, 198.2, 660, 422/102, 24, 186.3; 250/428; 252/175; 700/116, 216, 231, 225, 237; 702/22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/0051767 A1 (COCCARO et al) 20 March 2003 (20.03.2003) entire document	23-25
X	US 2003/0168389 A1 (ASTLE et al) 11 September 2003 (11/09.2003)	27,28
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Y	US 2002/0167322 A1 (HE et al) 14 November 2002 (14.11.2002) entire document	3-5, 9-16, 22
Y	US 2003/0080140 A1 (NEAS et al) 01 May 2003 (01.05.2003) entire document	3-5, 9-16, 22, 26
X	US 4,246,101 A (SELBY, III) 20 January 1981 (20.01.1981) entire document	17-21, 29, 30
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Y	US 5,259,954 A (TAYLOR) 09. November. 1993 (09.11.1993) entire document	3-5,
X	US 5,259,954 A (TAYLOR) 09. November. 1993 (09.11.1993) entire document	1,2
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Y		3-8

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

14 April 2005 (14.04.2005)

Date of mailing of the international search report

11 MAY 2005

Name and mailing address of the ISA/US

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**INTERNATIONAL SEARCH REPORT**International application No.  
PCT/US05/00381**C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,475,385 B1 (BOYCE et al) 05. November. 2002 (05.11.2002) entire document	1,2,20,21,17
--		_____
Y	WO 03/006139 A1 (NXSTAGE MEDICAL INC) 23 January 2003 (23.01.2003), entire document	3-8,29,30
		9-16,22

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**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

  

The additional search fees were accompanied by the applicant's protest.

 No protest accompanied the payment of additional search fees.

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**BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1,2, drawn to water treatment plant with microporous membrane.

Group II, claim(s) 3-5, drawn to water treatment plant control device.

Group III, claim(s) 6-8, drawn to water treatment plant with filters in series, pump and controller.

Group IV, claim(s) 9-16, drawn to Fluid container device with sensor, etc.

Group V, claim(s) 17,29,30, drawn to water treatment plant with ion exchange.

Group VI, claim(s) 18,19, drawn to water treatment plant with resistivity monitor to shut pump.

Group VII, claim(s) 20,21, drawn to water treatment plant with UV.

Group VIII, claim(s) 22, drawn to fluid container device with mating external connector seal.

Group IX, claim(s) 23, drawn to water treatment plant with download software instructions.

Group X, claim(s) 24-28, drawn to water treatment plant having a controller to read unique identifier data.

The inventions listed as Groups I-X do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: no common special technical feature was found.